

CURRICULUM VITAE

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Education

1972-1976

Seton Hall University
South Orange, New Jersey
Degree: B.S. in Biology, 1976

1976-1980

College of Medicine and Dentistry of New Jersey
Graduate School of Biomedical Sciences
Newark, New Jersey
Degree: Ph.D. in Experimental Pathology, 1980

1980-1984 University of Medicine and Dentistry of New Jersey
New Jersey Medical School
Newark, New Jersey
Degree: M.D., 1984

Postgraduate Training

1984-1985 Intern, Hospital of the Medical College of Pennsylvania
Philadelphia, Pennsylvania

1985-1987 Resident in Medicine
Hospital of the Medical College of Pennsylvania
Philadelphia, Pennsylvania

1987-1988 Chief Medical Resident
Hospital of the Medical College of Pennsylvania

1988-1991 Fellow in Infectious Diseases
University of Virginia Health Sciences Center

Employment History

1987-1988 Instructor in Medicine
Medical College of Pennsylvania

1988 Visiting Lecturer in Clinical Medicine
Pennsylvania College of Optometry

1991-1993 Assistant Professor of Medicine
Medical College of Pennsylvania

1991-1994 Assistant Director, Internal Medicine Residency Program
Medical College of Pennsylvania Hospital

1993-1998 Associate Professor of Medicine
Medical College of Pennsylvania

1995-1997 Director, Internal Medicine Residency Program
Medical College of Pennsylvania Hospital

1997-2000 Associate Chair for Education
Department of Medicine
MCP Hahnemann University

1997-2002	Director, Internal Medicine Residency Program MCP Hahnemann University
1998-2002	Director, Medicine-Pediatrics Residency Program MCP Hahnemann University-St. Christopher's Hospital for Children
2001-2002	Vice Chair for Education, Department of Medicine MCP Hahnemann University
1997-2001	Professor of Medicine MCP Hahnemann University
2002-	Professor of Medicine Drexel University College of Medicine
2002-	Associate Dean for Admissions Drexel University College of Medicine

Certification and Licensure

1985	Diplomate, National Board of Medical Examiners _____
1985	Commonwealth of Pennsylvania _____
1987	Diplomate, American Board of Internal Medicine _____
1992	Diplomate in Infectious Diseases American Board of Internal Medicine _____

Honors and Awards

1976	Merit Scholarship from the College of Medicine and Dentistry of New Jersey, Graduate School of Biomedical Sciences
1983	Alpha Omega Alpha Honor Medical Society
1991	Fellowship, American College of Physicians

1992	Excellence in Teaching Award from Medicine Housestaff Medical College of Pennsylvania Hospital
1993	Administration of Oath at Commencement Medical College of Pennsylvania
1993	Golden Apple Award for Excellence in Teaching from Class of 1993 Medical College of Pennsylvania
1993	Golden Apple Award for Excellence in Teaching from Class of 1994 Medical College of Pennsylvania
1994	Investiture at Commencement Medical College of Pennsylvania
1994	Gender Equity Award American Medical Women's Association
1995	Administration of Oath at Commencement Medical College of Pennsylvania
1995	Trustees' Award for Teaching Excellence Medical College of Pennsylvania
1996	Investiture at Commencement Medical College of Pennsylvania
1996	Golden Apple Award for Excellence in Teaching from Class of 1996 Medical College of Pennsylvania
1997	Gender Equity Award American Medical Women's Association
1997	Golden Apple Award for Excellence in Teaching from Class of 1997 Allegheny University of the Health Sciences, MCP Hahnemann School of Medicine
1998	Speaker Award, Fifth Annual Carlos J. Finlay Conference Society of Ibero Latin American Medical Professionals
1998	Dean's Special Award for Excellence in Clinical Teaching Allegheny University Hospitals, MCP

1998	Investiture at Commencement Medical College of Pennsylvania
1998	Fellowship, Infectious Diseases Society of America
1999	Dean's Special Award for Excellence in Clinical Teaching Medical College of Pennsylvania Hospital
1999	Benediction at Commencement MCP Hahnemann University School of Medicine
2000	Investiture at Commencement MCP Hahnemann University School of Medicine
2001	Administration of Oath at Commencement MCP Hahnemann University School of Medicine
2001	The Walter Rubin Award for Excellence in Teaching from Internal Medicine Residents MCP Hahnemann University
2001-2002	The Best Doctors in America
2002	Philadelphia Magazine's Top Docs 2002 (Infectious Diseases)
2002	Golden Apple Award for Excellence in Teaching from Class of 2002 MCP Hahnemann School of Medicine
2002	Dean's Special Award for Excellence in Clinical Teaching Medical College of Pennsylvania Hospital
2002	Marshal at Commencement MCP Hahnemann School of Medicine

Memberships and Offices in Professional Societies

1983-	Alpha Omega Alpha Honor Medical Society
1983-1992	American Medical Association
1984-1988	Pennsylvania Medical Society

1986-1988	Associate, American College of Physicians
1988-1991	Member, American College of Physicians
1988-	American Society for Microbiology
1989-1996	American Federation for Clinical Research
1991-	Fellow, American College of Physicians
1993-2002	Association of Program Directors in Internal Medicine
1995-1997	Society for Healthcare Epidemiology of America
1999-	Fellow, Infectious Diseases Society of America Council Member from the PA Eastern Region II of the Pennsylvania College of Internal Medicine (PCIM), ACP-ASIM

Professional Committees and Administrative Service

1978-1979	Vice-President, Graduate Student Association CMDNJ-Graduate School of Biomedical Sciences
1979-1980	President, Graduate Student Association CMDNJ-Graduate School of Biomedical Sciences
1979	Representative for Middle States Accreditation CMDNJ-Graduate School of Biomedical Sciences
1983-1984	Search Committee for Chair, Department of Pathology UMDNJ-New Jersey Medical School
1985-1987	Library Committee Medical College of Pennsylvania
1987-1988	Graduate Medical Education Committee Residency Review Committee Medical Records Committee DNR Committee Medical College of Pennsylvania

1987-1988	CPR Committee MICU Committee Utilization Review Committee Philadelphia Veterans Affairs Medical Center
1989-1991	National Institute of Allergy and Infectious Diseases Mycoses Study Group
1991-1994	Pharmacy and Therapeutics Committee
1991-1995	Assistant Director, Internal Medicine Residency Program Residency Evaluation Committee Program Advisory Committee
1992	Thesis Committee: _____ _____ _____
1992-1994	Critical Care Committee Emergency Care Committee
1992	Abstract Selection Committee Regional Meeting of American College of Physicians
1993	Faculty, Mini-Internship Program Philadelphia County Medical Society
1993	Chair, Junior Clerkship Orientation Committee Faculty-Administration-Student Relations Committee
1993-1994	Chair, Pharmacy and Therapeutics Committee Patient Focus Initiative Task Force MICU Planning Committee Patient Chart Redesign Task Force Patient Focus Initiative Education Task Force Executive Medical Board Primary Care Steering Committee (VA Medical Center)
1994	Abstract Selection Committee Regional Meeting of the American College of Physicians
1995	Thesis Committee: _____ _____ _____

1995-1996	Steering Committee of the Faculty Executive Committee of the Faculty
1995-1997	Director, Internal Medicine Residency Program at the Medical College of Pennsylvania Hospital Executive Committee, Department of Medicine Student Education Coordinating Committee Faculty Student Relations Committee Policy and Procedure Task Force Task Force on Research and Development in Education Generalist Initiative Working Group in Internal Medicine Task Force on Merging the Internal Medicine Residency Programs of the Medical College of Pennsylvania Hospital and Hahnemann University Hospital
1995-1998	Resident Research Committee (Chair 1996-1998) Eastern Pennsylvania Governor's Council, ACP
1997-1998	Nominating Committee, APDIM Professionalism Survey, ABIM Search Committee for Chair of Women's Health Institute Education Conference Planning Committee Advisory Board for Integrated Curriculum Advisory Board for Women's Health Education Program Trustees' Award Winners Task Force GME Subcommittee on Core Curriculum and Funding Chair, Task Force on Introduction of Women's Health into the Medical School Curriculum
1998	Judge of Infectious Diseases Abstracts Pennsylvania Coalition for Internal Medicine Chair, OB-GYN Internal Review Committee
1999	Commencement Committee Chair, Psychiatry Internal Review Committee Member, Pathology Internal Review Committee Nominating Committee, MCP Hospital Medical Staff
2000	Program Committee, Pennsylvania Coalition for Internal Medicine Abstract Review Committee, 2000 PCIM Meeting Nominating Committee, PCIM Strategic Planning Committee, Department of Medicine Chair, Education Summit Planning Committee 2001 Program Committee, PCIM

1991-2002	Graduate Medical Education Committee
1994-2002	National Academy on Women's Health Medical Education Women's Health Institute Director, Six-Year Integrated Program in Internal Medicine Association of Program Directors in Internal Medicine Residency Education Committee
1997-2002	Director, Internal Medicine Residency Program at MCP Hahnemann University Associate Chair for Education, Department of Medicine Education Committee, APDIM Graduate Medical Education Subcommittee Clerkship Directors Committee
1998-2002	Co-Director, Medicine-Pediatrics Residency Program
1999-2002	Chair, Abstract Review Committee, APDIM
2001-2002	Vice Chair for Education, Department of Medicine Management Committee, Department of Medicine Chair, Task Force to Review Student Clinical Evaluation Form Interim Chief, Division of Infectious Diseases Director, Infectious Diseases Fellowship Program
1995-	Third and Fourth Year Clinical Curriculum Subcommittee Third and Fourth Year Student Promotions Committee Faculty Advisor, Internal Medicine Student Society
1998-	Faculty Councillor, Alpha Omega Alpha Honor Medical Society Executive Medical Board, Medical College of Pennsylvania Hospital Chair, Physician Health Committee Chair, Professional Conduct Committee
1999-	Education Coordinating Committee, School of Medicine Council Member from the PA Eastern Region II of the Pennsylvania College of Internal Medicine (PCIM), ACP-ASIM

2001- MD/PhD Committee, Drexel University College of Medicine
 Fellowship & Young Investigator Grants Award
 Committee, IDSA
 Chair, Central Nervous System Infections Practice
 Guidelines Committee, IDSA
 Chair, Program Planning Committee of 2002 PCIM
 Annual Meeting

2002- Department of Medicine Appointments and Promotions
 Committee
 Chair, Task Force to Integrate Basic Science into
 Clinical Curriculum
 Education Vice Dean's Committee
 Special Elective Request Subcommittee
 VISN 4 Eastern Task Force

Educational Activities

1991-1996 Co-Director, Medicine Subinternship
 Lecturer, Physician Retraining Course

1995-1997 Director, Internal Medicine Residency Program at
 Medical College of Pennsylvania Hospital
 Mentor, Surgical Critical Care Fellows

1995-2002 Associate Chair for Education, Department of Medicine
 Director, Internal Medicine Residency Program
 MCP Hahnemann University

1998 Co-Director, Fifth Annual Carlos J. Finlay Symposium
 Society of Ibero Latin American Medical Professionals

1998-2002 Co-Director, Medicine-Pediatrics Residency Program
 MCP Hahnemann University-St. Christopher's Hospital
 for Children

2001-2002 Vice Chair for Education, Department of Medicine
 Director, Infectious Diseases Fellowship Program

1991- Program for Integrated Learning Resource Instructor
 Introduction to Clinical Medicine Lecturer
 Physical Diagnosis Preceptor
 Weekly Professor's Rounds with Junior Medical Students

1994-

Director, Senior Year Discipline-Based Medicine Pathway
Director, Medicine Subinternship
Director, Course in Tropical Medicine and
Infectious Diseases

Clinical Activities

1991-

General Medicine Attending
Infectious Diseases Consult Attending

Grant Support

1990-1993

Principal Investigator at the Medical College of
Pennsylvania in an open, comparative multi-center study of
_____ in the treatment of
candidemia in non-neutropenic patients

1990-1991

Co-investigator at the University of Virginia Health
Sciences Center in a study comparing the antiviral activity
of LY217896 versus placebo in human influenza A virus
infection

1992-1993

Co-investigator at the Medical College of Pennsylvania
in a multi-center study evaluating the efficacy of the
_____ in septic shock _____

1993-1995

Principal Investigator of a study funded by the Allegheny-
Singer Research Institute on the pathogenesis and
pathophysiology of bacterial meningitis

Editorships

1999-2000

Sepsis Section Editor
Current Infectious Disease Reports

2001-

Central Nervous System and Eye Infections Editor
Current Infectious Disease Reports

Ad Hoc Reviewer

1995-

New England Journal of Medicine
Annals of Internal Medicine
The Lancet
National Bacterial Meningitis Trust
American Journal of Medicine
Clinical Infectious Diseases
American Journal of Respiratory and Critical Care Medicine
International Journal of Infectious Diseases
Clineguide
The Health Research Board of Ireland
BioMed Central
Life Sciences
Infections in Medicine
Pediatric Infectious Disease Journal

Editorial Boards

2001-

MD Consult – Infectious Disease

**APPEARS THIS WAY
ON ORIGINAL**

PUBLICATIONS

Original Articles and Reviews

1. Tunkel AR, Studzinski GP. Effect of aminonucleoside on transcription, methylation, and maturation of ribosomal RNA in SV40-transformed human lung fibroblasts. *J Cell Physiol* 1981;108:239-249.
2. Tunkel AR, Studzinski GP. Adenosine analogue induced ultrastructural changes that correlate with inhibition of ribosomal RNA processing. *J Histochem Cytochem* 1984;32:363-371.
3. Tunkel AR, Pasupuleti R, Acosta WR. Improvement of idiopathic torsion dystonia following dystonia-induced cervical subluxation. *J Neurol Neurosurg Psych* 1986;49:957.
4. Tunkel AR, Shuman M, Popkin M, Seth R, Hoffman B. Minoxidil induced systemic lupus erythematosus. *Arch Intern Med* 1987;147:599-600.
5. Tunkel AR, Scheld WM. Application of therapy in animal models to bacterial infection in human disease. *Infect Dis Clin North Am* 1989;3:441-459.
6. Tunkel AR, Scheld WM. Therapy of bacterial meningitis: principles and practice. *Infect Cont Hosp Epidemiol* 1989;10:565-569.
7. Tunkel AR, Scheld WM. Alterations of the blood-brain barrier in bacterial meningitis: in vivo and in vitro models. *Pediatr Infect Dis J* 1989;8:911-913.
8. Tunkel AR, Sebastianelli K, Pandit N, Brody JI. Development of 5q-myelodysplasia in a patient with sarcoidosis. *Am J Hematol* 1990;34:225-227.
9. Tunkel AR, Wispelwey B, Scheld WM. Bacterial meningitis: recent advances in pathophysiology and treatment. *Ann Intern Med* 1990;112:610-623.
10. Tunkel AR, Starr K. Trimethoprim-sulfamethoxazole-associated aseptic meningitis. *Am J Med* 1990;88:696.
11. Tunkel AR, Wispelwey B, Scheld WM. The pathogenesis and pathophysiology of meningitis. *Infect Dis Clin North Am* 1990;4:555-581.
12. Wispelwey B, Tunkel AR, Scheld WM. Bacterial meningitis in adults. *Infect Dis Clin North Am* 1990;4:645-659.
13. Kaufman BA, Tunkel AR, Pryor J, Dacey RG Jr. Meningitis in the neurosurgical patient. *Infect Dis Clin North Am* 1990;4:677-701.

14. Tunkel AR, Scheld WM. Aztreonam. *Infect Cont Hosp Epidemiol* 1990;11:486-494.
15. Tunkel AR, Rosser SW, Hansen EJ, Scheld WM. Blood-brain barrier alterations in bacterial meningitis: development of an in vitro model and observations on the effects of lipopolysaccharide. *In Vitro Cell Devel Biol* 1991;27A:113-120.
16. Tunkel AR, Scheld WM. Acute therapy of bacterial meningitis. *J Intensive Care Med* 1991;6:229-237.
17. Tunkel AR, Scheld WM. Therapy of bacterial meningitis in children. *Int J Antimicrob Agents* 1991;1:109-115.
18. Tunkel AR, Scheld WM. Ofloxacin. *Infect Cont Hosp Epidemiol* 1991;12:549-557.
19. Tunkel AR, Fisch MJ, Schlein A, Scheld WM. *Enterobacter* endocarditis. *Scand J Infect Dis* 1992;24:233-240.
20. Tunkel AR, Wispelwey B, Quagliarello VJ, Rosser SW, Lesse AJ, Hansen EJ, Scheld WM. Pathophysiology of blood-brain barrier alterations during experimental *Haemophilus influenzae* meningitis. *J Infect Dis* 1992;165:S119-S120.
21. Whitman MS, Tunkel AR. Azithromycin and clarithromycin: overview and comparison with erythromycin. *Infect Cont Hosp Epidemiol* 1992;12:357-368.
22. Greenwald BD, Tunkel AR, Morgan KM, Campochiaro PA, Donowitz GR. *Candida* endophthalmitis after lithotripsy of renal calculi. *South Med J* 1992;85:773-774.
23. Tunkel AR, Thomas CY, Wispelwey B. *Candida* prosthetic arthritis: report of a case treated with fluconazole and review of the literature. *Am J Med* 1993;94:100-103.
24. Tunkel AR, Scheld WM. Pathogenesis and pathophysiology of bacterial meningitis. *Annu Rev Med* 1993;44:103-120.
25. Tunkel AR. Ofloxacin in the treatment of uncomplicated gonorrhea. *Penetration* 1993:51-55.
26. Tunkel AR, Kelsall B, Rein MF, Innes DJ Jr, Saulsbury FT, Vollmer K, Wispelwey B. Increase in absolute CD4 lymphocyte count following splenectomy in HIV-infected patients. *Am J Med Sci* 1993;306:105-110.

27. Sable C, Tunkel AR, Scheld WM. Adjunctive dexamethasone in the therapy of bacterial meningitis. *Infect Med* 1993;10(9):49-55.
28. Tunkel AR, Scheld WM. Pathogenesis and pathophysiology of bacterial meningitis. *Clin Microbiol Rev* 1993;6:118-136.
29. Tunkel AR, Kaye D. Neurologic complications of infective endocarditis. *Neurol Clin* 1993;11:419-440.
30. Tunkel AR. Evaluation of culture-negative endocarditis. *Hosp Practice* 1993;28(2A):59-66.
31. Tunkel AR. Bacterial meningitis: non-antibiotic modes of therapy. *Curr Op Infect Dis* 1993;6:638-643.
32. Whitman MS, Rovito MA, Klions D, Tunkel AR. Infected atrial myxoma: case report and review. *Clin Infect Dis* 1994;18:657-658.
33. Zuckerman J, Tunkel AR. Itraconazole: a new triazole antifungal agent. *Infect Cont Hosp Epidemiol* 1994;15:397-410.
34. Hayden FG, Tunkel AR, Treanor JJ, Betts RF, Allerheiligen S, Harris J. Oral LY217896 for prevention of experimental influenza A virus infection and illness in humans. *Antimicrob Agents Chemother* 1994;38:1178-1181.
35. Rex JH, Bennett JE, Sugar AM, Pappas PG, Van der Horst CM, Edwards JE, Washburn RG, Scheld WM, Karchmer AW, Neu HC, Stern JJ, Tuazon CU, Rubin RH, Simmons BP, Sobel JD, Parry MF, Horton JM, Ephthimios IE, Tunkel AR, Greenfield RA, Weinberg WG, McKinsey DS, Brass C, NIAID Mycoses Study Group, Dine AP, Levenstein MJ, Webb CD. A randomized trial comparing fluconazole with amphotericin B for the treatment of candidemia in patients without neutropenia. *N Engl J Med* 1994;331:1325-1330.
36. Slavoski LA, Tunkel AR. Therapy of fungal meningitis. *Clin Neuropharmacol* 1995;18:95-112.
37. Papastamelos AG, Tunkel AR. Antibacterial agents in infections of the central nervous system and eye. *Infect Dis Clin North Am* 1995;9:615-637.
38. Rockowitz J, Tunkel AR. Bacterial meningitis: practical guidelines for management. *Drugs* 1995;50:838-853.
39. Tunkel AR, Scheld WM. Acute bacterial meningitis. *Lancet* 1995;346:1675-1680.

40. Lipton JD, Scheld WM, Tunkel AR. CNS infections – 30 minutes to act. *Patient Care* 1996;30(10):59-79.
41. Tunkel AR, Scheld WM. Acute bacterial meningitis. *Russky Meditsinsky J* 1996;3:425-437.
42. Rockowitz J, Tunkel AR. Management of bacterial meningitis. *Med Progress* 1996;15(4):25-29.
43. Pons V, Greenspan D, Lozada-Nur F, McPhail L, Gallant JE, Tunkel A, Johnson CC, McCarty J, Panzer H, Levenstein M, Barranco A, Green S. Oropharyngeal candidiasis in patients with AIDS: randomized comparison of fluconazole versus nystatin oral suspensions. *Clin Infect Dis* 1997;24:1204-1207.
44. Tunkel AR, Scheld WM. Issues in the management of bacterial meningitis. *Am Fam Physician* 1997;56:1355-1362.
45. Tunkel AR. Chronic meningitis. *Curr Infect Dis Rep* 1999;1:160-165
46. Breen G, Tunkel AR. Adjunctive therapies for sepsis and septic shock. *Curr Infect Dis Rep* 1999;1:224-229.
47. Tunkel AR. Brain abscess. *Curr Treat Options Infect Dis* 2000;2:449-460.
48. Chowdhury MH, Tunkel AR. Antibacterial agents in infections of the central nervous system. *Infect Dis Clin North Am* 2000;14:391-408.
49. Short WR, Tunkel AR. Changing epidemiology of bacterial meningitis in the United States. *Curr Infect Dis Rep* 2000;2:327-331.
50. Rocha P, Baleeiro C, Tunkel AR. Impact of antimicrobial resistance on the treatment of invasive pneumococcal infections. *Curr Infect Dis Rep* 2000;2:399-408.
51. Short WR, Tunkel. Timing of administration of antimicrobial therapy in bacterial meningitis. *Curr Infect Dis Rep* 2001;3:360-364.
52. Tunkel AR, Sepkowitz KA. Infections caused by viridans streptococci in patients with neutropenia. *Clin Infect Dis* 2002;34:1524-1529.
53. Tunkel AR, Scheld WM. Treatment of bacterial meningitis. *Curr Infect Dis Rep* 2002;4:7-16.
54. Wildes SS, Tunkel AR. Meningococcal vaccines: a progress report. *BioDrugs* 2002;16:321-329.

55. Tunkel AR, Pradhan S. Central nervous system infections in injection drug users. *Infect Dis Clin North Am* 2002;16:589-605.
56. Sinner SW, Tunkel AR. Approach to the diagnosis and management of tuberculous meningitis. *Current Infect Dis Rep* 2002;4:324-331.
57. Cepelowicz J, Tunkel AR. Viral encephalitis. *Current Op Infect Dis*, in press.

Editorials and Commentaries

1. Tunkel AR, Kaye D. Endocarditis with negative blood cultures. *N Engl J Med* 1992;326:1215-1217.
2. Schwartz MT, Tunkel AR. Therapy of penicillin-resistant pneumococcal meningitis. *Zentral Bakteriell* 1995;282:7-12.
3. Tunkel AR. Coccidioidal pneumonia and meningitis masquerading as Legionnaires' disease. *Resident Staff Physician* 1996;42(12):28-29.
4. Tunkel AR. The videotape review process in an internal medicine and medicine/pediatrics training program – a 15 year descriptive. *Acad Med* 1996;71:743.
5. Tunkel AR. Septic shock and toxic shock: do adjunctive therapies improve outcome? *Curr Infect Dis Rep* 1999;1:215-217.
6. Tunkel AR. Sepsis clinical trials review. *Curr Infect Dis Rep* 2000;2:387-390.
7. Tunkel AR. Central nervous system clinical trials review. *Curr Infect Dis Rep* 2001;3:347-351.
8. Tunkel AR. Should my teenagers be immunized against meningococcal infection? *MD Consult Infectious Disease*. April 8, 2002.
<http://www.mdconsult.com>.
9. Tunkel AR. Central nervous system clinical trials review. *Curr Infect Dis Rep* 2002;4:307-308.
10. Tunkel AR, Scheld WM. Corticosteroids for everyone with meningitis? *N Engl J Med* 2002;347:1613-1615.

Books

1. Tunkel AR. *Bacterial Meningitis*. Baltimore: Lippincott, Williams and Wilkins. 2001.

Book Chapters

1. Tunkel AR, Scheld WM. Acute meningitis. In: Internal Medicine, 3rd ed. Stein JH, ed. Boston: Little, Brown, and Company. 1990:1281-1291.
2. Tunkel AR, Scheld WM. Acute infectious complications of head injury. In: Handbook of Clinical Neurology, Volume 57: Head Injury. Braakman R, ed. Amsterdam: Elsevier Science Publishers. 1990:317-326.
3. Tunkel AR, Scheld WM. The blood-brain barrier in bacterial meningitis. In: Proceedings of the 16th International Congress of Chemotherapy (Jerusalem, Israel). 1990:575.1-575.3.
4. Tunkel AR, Scheld WM. Correlation of in vitro susceptibility with response to infection in experimental animals. In: Proceedings of the 16th International Congress of Chemotherapy (Jerusalem, Israel). 1990:576.1-576.3.
5. Tunkel AR, Scheld WM. The blood-brain barrier in meningitis and its pharmacologic modulation. In: Proceedings of the Boerhaave Course on Infective Meningitis (Leiden, The Netherlands). 1990.
6. Tunkel AR, Scheld WM. Bacterial meningitis: pathogenic and pathophysiologic mechanisms. In: Handbook of Infectious Diseases, Infections of the Central Nervous System. Lambert HP, ed. Philadelphia: BC Decker Inc. 1991:1-15.
7. Tunkel AR, Scheld WM. Pathogenesis and pathophysiology of bacterial infections of the central nervous system. In: Infections of the Central Nervous System. Scheld WM, Whitley RJ, Durack DT, eds. New York: Raven Press. 1991:297-312.
8. Roos KL, Tunkel AR, Scheld WM. Acute bacterial meningitis in children and adults. In: Infections of the Central Nervous System. Scheld WM, Whitley RJ, Durack DT, eds. New York: Raven Press. 1991:335-409.
9. Tunkel AR, Mandell GL. Biology of infectious disease. In: The Merck Manual, 16th ed. Berkow R, ed. Rahway, NJ: Merck Research Laboratories. 1992:5-11.
10. Tunkel AR, Scheld WM. Bacterial infections of the central nervous system. In: Principles of Critical Care Medicine. Hall JB, Schmidt GA, Wood LDH, eds. New York: McGraw Hill. 1992:1275-1292.
11. Tunkel AR, Scheld WM. Bacterial infections in adults. In: Diseases of the Nervous System, 2nd ed. Asbury AK, McKhann GM, McDonald WI, eds. Philadelphia: WB Saunders. 1992:1340-1349.

12. Tunkel AR, Scheld WM. Experimental models of endocarditis. In: Infective Endocarditis, 2nd ed. Kaye D, ed. New York: Raven Press. 1992:37-56.
13. Tunkel AR, Mandell GL. Infecting microorganisms. In: Infective Endocarditis, 2nd ed. Kaye D, ed. New York: Raven Press. 1992:85-97.
14. Tunkel AR. Mechanisms and management of bacterial meningitis. In: Update on Critical Care. Bleck TP, ed. Minneapolis: American Academy of Neurology. 1992:1-15.
15. Tunkel AR. Bacterial meningitis. In: Conn's Current Therapy, 1993 ed. Rakel RE, ed. Philadelphia: WB Saunders. 1993:105-109.
16. Tunkel AR. Brain abscess. In: Conn's Current Therapy, 1993 ed. Rakel RE, ed. Philadelphia: WB Saunders. 1993:835-838.
17. Tunkel AR, Scheld WM. Bacterial meningitis. In: Principles and Practice of Medical Intensive Care. Geheb M, Carlson R, eds. Philadelphia: WB Saunders. 1993:454-466.
18. Tunkel AR, Scheld WM. Treatment of bacterial meningitis. In: Quinolone Antimicrobial Agents. Wolfson JS, Hooper DC, eds. Washington, DC: American Society for Microbiology. 1993:381-395.
19. Tunkel AR, Kaye D. Urinary tract infections. In: Principles of Geriatric Medicine and Gerontology, 3rd ed. Hazzard WR, Bierman EL, Blass JP, Ettinger WH Jr, Halter JB, eds. New York: McGraw-Hill. 1993:625-635.
20. Tunkel AR. Brain abscess. In: Conn's Current Therapy, 1994 ed. Rakel RE, ed. Philadelphia: WB Saunders. 1994:828-831.
21. Tunkel AR, Scheld WM. Central nervous system infection in the compromised host. In: Clinical Approach to Infection in the Compromised Host, 3rd ed. Rubin RH, Young LS, eds. New York: Plenum Publishing Corporation. 1994:163-210.
22. Tunkel AR, Scheld WM. Acute meningitis. In: Internal Medicine, 4th ed. St. Louis: Mosby Year Book. 1994:1886-1899.
23. Kaye D, Tunkel AR, Fournier GR Jr. Urinary tract infections. In: Internal Medicine, 4th ed. Stein JH, ed. St. Louis: Mosby Year Book. 1994:1952-1963.
24. Tunkel AR. Background. In: Managing Meningococcal Disease in College Populations (monograph). New York: KPR InforMedia. 1994:6.

25. Tunkel AR. Pathogenesis and pathophysiology. In: *Managing Meningococcal Disease in College Populations* (monograph). New York: KPR InforMedia. 1994:9.
26. Tunkel AR. Diagnosis. In: *Managing Meningococcal Disease in College Populations* (monograph). New York: KPR InforMedia. 1994:10-13.
27. Tunkel AR. Treatment. In: *Managing Meningococcal Disease in College Populations* (monograph). New York: KPR InforMedia. 1994:14-17.
28. Tunkel AR, Kaye D. Infective endocarditis. In: *The Merck Manual of Geriatrics*, 2nd ed. Abrams WB, Beers MH, Berkow R, eds. Rahway, NJ: Merck Research Laboratories. 1995:494-500.
29. Tunkel AR, Kaye D. Influenza. In: *The Merck Manual of Geriatrics*, 2nd ed. Abrams WB, Beers MH, Berkow R, eds. Rahway, NJ: Merck Research Laboratories. 1995:587-592.
30. Tunkel AR, Kaye D. Meningitis. In: *The Merck Manual of Geriatrics*, 2nd ed. Abrams WB, Beers MH, Berkow R, eds. Rahway, NJ: Merck Research Laboratories. 1995:1188-1194.
31. Tunkel AR. Topical antibacterials. In: *Principles and Practice of Infectious Diseases*, 4th ed. Mandell GL, Bennett JE, Dolin R, eds. New York: Churchill Livingstone. 1995:381-389.
32. Tunkel AR, Scheld WM. Acute meningitis. In: *Principles and Practice of Infectious Diseases*, 4th ed. Mandell GL, Bennett JE, Dolin R, eds. New York: Churchill Livingstone. 1995:831-865.
33. Johnson CC, Tunkel AR. Viridans streptococci and groups C and G streptococci. In: *Principles and Practice of Infectious Diseases*, 4th ed. Mandell GL, Bennett JE, Dolin R, eds. New York: Churchill Livingstone. 1995:1845-1861.
34. Tunkel AR, Croul SE. Subacute and chronic meningitides. In: *Atlas of Infectious Diseases. Volume III: Central Nervous System and Eye Infections*. Bleck TP, ed. Philadelphia: Current Science. 1995.
35. Tunkel AR. Bacterial meningitis. In: *Current Therapy of Infectious Disease*. Schlossberg D, ed. St. Louis: Mosby Year Book. 1996:212-216.
36. Tunkel AR, Scheld WM. Acute bacterial meningitis in adults. In: *Current Clinical Topics in Infectious Diseases, Volume 16*. Remington JS, Swartz MN, eds. Cambridge: Blackwell Science Inc. 1996:215-239.

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Abstracts

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3. Zelikoff J, Ende N, Orsi E, Tunkel A, Britten T. Detection of herpesviruses by immunofluorescence in routine renal biopsies. Fed Proc 1980;39:780.
4. Tunkel AR, Rosser SW, Scheld WM. *Haemophilus influenzae* lipopolysaccharide (LPS)-induced alterations in blood-brain barrier (BBB) permeability in an in vitro model. In: Program and Abstracts of the 29th Interscience Conference on Antimicrobial Agents and Chemotherapy (Houston, Texas). Washington, DC: American Society for Microbiology. 1989:219.

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9. Polomis DA, Tunkel AR, Wispelwey B, Scheld WM. Two cases of *Streptococcus salivarius* meningitis. Presented at the American College of Physicians Regional Meeting in Charlottesville, Virginia. March 23, 1991.
10. Tunkel AR, Rein MF, Kelsall B, Vollmer K, Wispelwey B. Marked increase in absolute CD4 lymphocyte counts following splenectomy in human immunodeficiency virus (HIV)-infected patients. In: Program and Abstracts of the 31st Interscience Conference on Antimicrobial Agents and Chemotherapy (Chicago, Illinois). Washington, DC: American Society for Microbiology. 1991:330.
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13. Zafar-Khan F, Tunkel AR. Polymicrobial anaerobic bacteremia in association with superior mesenteric vein thrombosis. Presented at the American College of Physicians Regional Meeting in Philadelphia, Pennsylvania. October 21, 1994.

14. Pons V, Greenspan D, Gallant J, Tunkel A, Johnson C, McCarty J, Green S. Comparative clinical study of oral suspension fluconazole versus topical liquid oral nystatin in the treatment of oropharyngeal candidiasis in AIDS. In: Program and Abstracts of the 35th Interscience Conference on Antimicrobial Agents and Chemotherapy (San Francisco, California). Washington, DC: American Society for Microbiology. 1995:244.
15. Tunkel AR, Scheld WM. Acute bacterial meningitis. *Infectious Diseases Digest*. 1996.
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Letters

1. Tunkel AR. Humanistic medicine. *N Engl J Med* 1981;305:589.
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4. Tunkel AR, D'Antonio J, Engel-Kominsky S, Browne B. Predicting the clinical course in intentional drug overdose. *Arch Intern Med* 1988;148:253.
5. Tunkel AR. Why are today's medical students choosing high technology specialties over internal medicine. *N Engl J Med* 1988;318:454-455.
6. Tunkel AR. The impending crisis in internal medicine training programs. *Am J Med* 1988;85:460-461.
7. Tunkel AR. Physical examination of asymptomatic adults for screening. *Ann Intern Med* 1989;110:744-745.
8. Tunkel AR. JAMA and AIDS: too much? not enough? *JAMA* 1989;262:2229-2230.

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**APPEARS THIS WAY
ON ORIGINAL**

PRESENTATIONS

National and International

1. Symposium. Crisis in Internal Medicine. American College of Physicians National Meeting. New York, New York (March 5, 1988).
2. Symposium. Update in Critical Care – Bacterial Meningitis. American Academy of Neurology National Meeting. San Diego, California (May 6-9, 1992).
3. Grand Rounds (Neurology). Bacterial Meningitis. UMDNJ-New Jersey Medical School. Newark, New Jersey (September 9, 1992).
4. Grand Rounds. Infective Endocarditis. York Hospital. York, Pennsylvania (March 11, 1993).
5. Course. Update in Infectious Diseases – Meningitis. American College of Physicians. Atlantic City, New Jersey (May 12-14, 1993).
6. CPC. Cavitory Pulmonary Infiltrates in an AIDS Patient. Veterans Affairs Medical Center. East Orange, New Jersey (May 26, 1993).
7. Symposium. Managing Meningococcal Disease in College Populations. American College Health Association. Aventura, Florida. (November 13-14, 1993).
8. Workshop. Development of a Curriculum in Women's Health. Association of Program Directors in Internal Medicine. Miami, Florida (April 18, 1994).
9. Workshop. Women's Health Curriculum. Association of American Medical Colleges. Boston, Massachusetts (October 31, 1994).
10. Symposium. Bacterial Meningitis in the Immunocompromised Host. Stockholm, Sweden (November 28, 1995).
11. Grand Rounds. Bacterial Meningitis. Wayne State University School of Medicine. Detroit, Michigan (April 3, 1996).
12. Grand Rounds. Clinical Approach to Meningitis. Muhlenberg Hospital. Plainfield, New Jersey (April 18, 1996).
13. Grand Rounds. Update on the Management of Meningitis. Allegheny General Hospital. Pittsburgh, Pennsylvania (May 22, 1996).

14. Grand Rounds. Recent Advances in Meningitis. UMDNJ-Robert Wood Johnson Medical School. New Brunswick, New Jersey (January 15, 1997).
15. Course. Infectious Diseases '97 Board Review Course – Meningitis, Brain Abscess, Cavernous Sinus Thrombosis, Subdural and Epidural Empyema. Tysons Corner, Virginia (October 17, 1997).
16. Symposium. The Challenges of a Health Systems Merger. Association of Program Directors in Internal Medicine. Washington, DC (October 30, 1997).
17. Grand Rounds. Bacterial Meningitis. Polyclinic Hospital. Harrisburg, Pennsylvania (February 3, 1998).
18. Course. Infectious Diseases '98 Board Review Course – Meningitis, Brain Abscess, Cavernous Sinus Thrombosis, Subdural and Epidural Empyema. Tysons Corner, Virginia (October 17, 1998).
19. Microbiology Conference. Bacterial Meningitis – Lessons Learned from Experimental Models. Northeastern Ohio Universities College of Medicine. Rootstown, Ohio (November 10, 1998).
20. Grand Rounds. Recent Advances in Bacterial Meningitis. Summa Health System. Akron, Ohio (November 11, 1998).
21. Course. Infectious Diseases '99 Board Review Course – Meningitis, Brain Abscess, Cavernous Sinus Thrombosis, Subdural and Epidural Empyema. Tysons Corner, Virginia (October 9, 1999).
22. Conference. Recent Advances in Bacterial Meningitis. New York University School of Medicine. New York, NY (August 24, 2000).
23. Course. Infectious Diseases 2000 Board Review Course – Meningitis, Brain Abscess, Cavernous Sinus Thrombosis, Subdural and Epidural Empyema. Tysons Corner, Virginia (October 14, 2000).
24. Workshop. The Impact of Bankruptcy on an Internal Medicine Residency Program. Association of Program Directors in Internal Medicine. Washington, DC (October 14, 2000).
25. Grand Rounds. Update on the Diagnosis and Treatment of Meningitis. Christiana Medical Center. Wilmington, DE (March 1, 2001).
26. Grand Rounds. Recent Advances in Bacterial Meningitis. University of Virginia Health Sciences Center. Charlottesville, VA (June 11, 2001).

27. Course. Infectious Diseases 2001 Board Review Course – Meningitis, Brain Abscess, Cavernous Sinus Thrombosis, Subdural and Epidural Empyema. Tysons Corner, Virginia (October 16, 2001).
28. Symposium. Recent Advances in Meningitis. 39th Annual Infectious Disease Symposium sponsored by Medical Society of Delaware. Wilmington, DE (May 7, 2002).
29. Course. Infectious Diseases 2002 Board Review Course – Meningitis, Brain Abscess, Cavernous Sinus Thrombosis, Subdural and Epidural Empyema. Tysons Corner, Virginia (October 8, 2002).
30. Meet-the-Professor. Meningitis. Infectious Diseases Society of America. Chicago, IL (October 26-27, 2002).

Regional

1. Grand Rounds. Fungal Infections. Medical College Hospitals-Bucks County Campus. Warminster, Pennsylvania (September 25, 1991).
2. Grand Rounds. Fungal Infections. JFK Hospital. Philadelphia, Pennsylvania (October 16, 1991).
3. Grand Rounds. Recent Advances in our Understanding of the Treatment and Pathogenesis of Meningitis. Lankenau Hospital. Wynnewood, Pennsylvania (August 21, 1992).
4. CPC. An AIDS Patient with Bilateral Pulmonary Infiltrates. Graduate Hospital. Philadelphia, Pennsylvania (December 16, 1992).
5. Grand Rounds. Bacterial Meningitis. Holy Redeemer Hospital. Huntingdon Valley, Pennsylvania (March 10, 1993).
6. Grand Rounds. Bacterial Meningitis. Delaware County Memorial Hospital (September 18, 1993).
7. Grand Rounds. Recent Advances in Bacterial Meningitis. Temple University Hospital. Philadelphia, Pennsylvania (September 29, 1993).
8. Grand Rounds. Candidiasis. Holy Redeemer Hospital. Huntingdon Valley, Pennsylvania (March 23, 1994).
9. CPC. A Cardiac Transplant Patient with Culture-Negative Endocarditis. Temple University Hospital. Philadelphia, Pennsylvania (April 20, 1994).

10. Grand Rounds. Candidiasis. Bryn Mawr Hospital. Bryn Mawr, Pennsylvania (July 7, 1994).
11. Grand Rounds. Infectious Diseases Emergencies. Frankford Hospital. Philadelphia, Pennsylvania (September 23, 1994).
12. Grand Rounds. Candidiasis. Presbyterian Medical Center. Philadelphia, Pennsylvania (October 14, 1994).
13. Grand Rounds. Endocarditis – An Update. Chester County Hospital (February 10, 1995).
14. Grand Rounds. Infectious Diseases Emergencies. St. Joseph's Hospital. Philadelphia, Pennsylvania (May 24, 1995).
15. Grand Rounds. Infectious Diseases Emergencies. Crozer-Chester Medical Center. Upland, Pennsylvania (October 23, 1995).
16. Grand Rounds. Sexually Transmitted Diseases. Chestnut Hill Hospital. Philadelphia, Pennsylvania (November 1995).
17. Grand Rounds. Respiratory Tract Infections. St. Joseph's Hospital. Philadelphia, Pennsylvania (November 14, 1995).
18. Grand Rounds. New Pathogens and Re-emerging Infectious Diseases. Presbyterian Medical Center. Philadelphia, Pennsylvania (November 17, 1995).
19. Grand Rounds. Disseminated Candidiasis. Lankenau Hospital. Wynnewood, Pennsylvania (December 15, 1995).
20. Grand Rounds. Sexually Transmitted Diseases. Methodist Hospital. Philadelphia, Pennsylvania (January 30, 1996).
21. Grand Rounds. Bacterial Meningitis. Bucks County Hospital. Warminster, Pennsylvania (February 7, 1996).
22. Grand Rounds. Bacterial Meningitis. Elkins Park Hospital. Elkins Park, Pennsylvania (February 15, 1996).
23. CPC. A Breast Cancer Patient with Rapidly Progressive Pulmonary Infiltrates. Temple University Hospital. Philadelphia, Pennsylvania (May 15, 1996).
24. Grand Rounds. Skin and Soft Tissue Infections. Albert Einstein Medical Center. Philadelphia, Pennsylvania (October 23, 1996).

25. Course. Update in Infectious Diseases – Meningitis. Allegheny University of the Health Sciences. Philadelphia, Pennsylvania (May 17, 1997).
26. Symposium. Teaching Residents How to Teach – 1997 Education Conference: “The Educator’s Tool Box.” Allegheny University of the Health Sciences. Philadelphia, Pennsylvania (July 30, 1997).
27. CPC. A Homeless Patient with Culture-Negative Endocarditis. Temple University Hospital. Philadelphia, Pennsylvania (September 9, 1997).
28. Grand Rounds. Bacterial Meningitis. Allegheny University Hospitals, MCP. Philadelphia, Pennsylvania (October 1, 1997).
29. Course. Philadelphia Board Review Course in Cardiovascular Diseases – Endocarditis. Allegheny University of the Health Sciences. Philadelphia, Pennsylvania (November 6, 1997).
30. Grand Rounds. Diagnosis and Treatment of Meningitis. Frankford Hospital. Philadelphia, Pennsylvania (April 7, 1998).
31. Symposium. An Update on Infectious Diseases – Community-acquired Pneumonia and New and Emerging Infectious Diseases. Fifth Annual Carlos J. Finlay Symposium. Society of Ibero Latin American Medical Professionals. Philadelphia, Pennsylvania (April 25, 1998).
32. Course. Philadelphia Board Review Course in Cardiovascular Diseases – Endocarditis. Allegheny University of the Health Sciences. Philadelphia, Pennsylvania (October 16, 1998).
33. Grand Rounds (Neurology). Recent Advances in Bacterial Meningitis. MCP Hahnemann University. Philadelphia, Pennsylvania (March 25, 1999).
34. Course. Update in Infectious Diseases – Meningitis and Brain Abscess. MCP Hahnemann University. Philadelphia, Pennsylvania (June 5, 1999).
35. Grand Rounds. Recent Update on Meningitis. Medical College of Pennsylvania Hospital. Philadelphia, Pennsylvania (October 20, 1999).
36. Grand Rounds. Recent Update on the Management of Meningitis. Hahnemann University Hospital. Philadelphia, Pennsylvania (February 16, 2000).
37. Grand Rounds. Central Nervous System Infections. Graduate Hospital. Philadelphia, Pennsylvania (September 27, 2000).
38. Grand Rounds. Meningitis. Warminster General Hospital. Warminster, PA (February 28, 2001).

39. Grand Rounds. Meningitis and Brain Abscess. Pennsylvania/Mid-Atlantic AIDS Education and Training Center. Philadelphia, PA (March 23, 2001).
40. Grand Rounds. Does Bankruptcy Influence Graduate Medical Education? MCP Hahnemann University. Philadelphia, PA (May 16, 2001).
41. Grand Rounds. Recent Advances in Bacterial Meningitis. Lehigh Valley Medical Center. Allentown, PA (May 22, 2001).
42. Workshop. Bioterrorism. MCP Hahnemann University. Philadelphia, PA (October 23, 2001).
43. Neurology Grand Rounds. Central Nervous System Infections. MCP Hahnemann University. Philadelphia, PA (March 22, 2002).
44. Course. Internal Medicine Board Review Course – Infectious Diseases Clinical Cases, Infective Endocarditis, Central Nervous System Infections. MCP Hahnemann University School of Medicine. Philadelphia, PA (June 15, 2002).
45. Grand Rounds. Brain Abscess. York Hospital. York, PA (June 20, 2002).
46. Seminar. Infective Endocarditis. Philadelphia College of Osteopathic Medicine Seminar in Infectious Diseases. Hershey, PA (June 30, 2002).
47. Grand Rounds. Focal Intracranial Infections. Hahnemann University Hospital. Philadelphia, PA (October 2, 2002).
48. Grand Rounds. Focal Intracranial Infections. Medical College of Pennsylvania Hospital. Philadelphia, PA (October 2, 2002).
49. Grand rounds. Update in Meningitis. Easton Hospital. Easton, PA (November 1, 2002).
50. Symposium. Viral Meningitis and Encephalitis. Eastern Pennsylvania Branch of the American Society for Microbiology Symposium on Infections of the Central Nervous System. Philadelphia, PA (November 14, 2002).